Health Education for Industrial Employees *at the* Hanford Atomic Products Operation

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MODERN INDUSTRIAL health programs strive to achieve something more than mere first aid for occupational injuries. An interest in the worker and his family beyond the boundaries of the plant is evident in the objectives of most forward-looking health plans. This idea was expressed by the Surgeon General of the Public Health Service in the following words (*1*):

"Modern industry is the logical partner of the health department in bringing the workers and their families all of the new and rapidly growing knowledge for preventing illness and improving health."

The benefits of adequate health programs in industry are realized by the employee as well as the employer. Better employee health, fewer accidents, reduced turnover, increased productivity, and lower compensation costs are among the benefits from such programs which have been reported by industry (*2*). Health education is a necessary function in those plans which attempt to meet these broadened objectives. A growing recognition of this need is evident in the reports of many workers in the field (*3–5*).

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The Hanford Program

An industrial health program which includes extensive provision for health education is carried out at the Hanford Atomic Products Operation, Richland, Wash.

The medical component of the company is uncommon in one chief respect. Because Richland, Wash., is a "Government town" operated for the Atomic Energy Commission by the General Electric Company, as is the Hanford Atomic Products Operation, all medical facilities for the town and the plant are administered by the company, including the hospital (Kadlec Hospital) and the local public health unit, which provide what would ordinarily be considered community services.

There are two other units in the health and safety section of the plant—a section in the employee and public relations department—which would not be so closely connected in a normal community as they are for the Hanford plant and the town of Richland. One of these is a safety unit, which is responsible for safety and fire protection, safety engineering, and safety education. The other is an industrial medicine subsection, which carries on a complete program

of preventive medicine, including pre-employment and periodic physical examinations, first aid and emergency care, industrial hygiene services, and health education.

Health Activities Committee

A planning and advisory group known as the health activities committee is the outstanding feature of the health education program at Hanford. This committee serves plant personnel in much the same manner that a community health council serves the community.

The advisory committee came into being as the result of a need on the part of the medical staff to know some of the real and imaginary health problems of the employees, their families, and their community. It was organized as an interpretive as well as an advisory group, its principle objective being the reduction of plant absenteeism through the dissemination of health information for the worker and his family.

Each member on the health activities committee is named by a department manager, thus assuring responsible representation by persons in a good position to assure adequate follow-through. Wide representation is assured by having all departments represented; some of these are, for example, the manufacturing, engineering, financial, and employee and public relations departments. The committee representatives consult with the department managers on health problems and are responsible for getting ideas and information from the employees. They are also responsible for the dissemination of health information within their departments.

Where experience has shown that the task of representing a particular department was too much for one person—either because of the size of the department or because the group was geographically scattered—the representation on the committee from the department has been increased. Currently, 3 departments have 3 representatives; and the other 3 departments have 1 representative each.

Serving as advisers to the group are the manager of the health and safety section, the manager of the industrial medicine subsection, and the chief of the public health unit. All are physicians.

The health educator acts as a permanent member of the committee. In this capacity, he directs the committee's activities and assures continuity of the health education program. He organizes and arranges special programs. In the average community, the health educator working in a city or county health department could well perform these functions. But because of the unique plant operations in the Richland community, the health educator is more closely allied to the industrial medicine unit of the plant.

Monthly meetings of the health activities committee are held. Any health or medical problems which have arisen among the employees or in the community are discussed at the meetings. Where real problems exist, a study is made, and the committee recommends a solution. Where misunderstandings exist, the discussion at the meetings usually clears the air. The committee then hears reports from members on past activities. Plant absenteeism reports are circulated for discussion, and the forthcoming health topic for the monthly health bulletin is reviewed by one of the medical advisers.

Health Bulletins

With the help of the medical advisers, the health activities committee selects the topic for each monthly health bulletin. Selection of topics is made on the basis of needs of employees, their interests, and other situations which may be of topical or seasonal importance. Interests may be observed by the committee representatives in their contacts with their own groups. Topical or seasonal problems which occur are treated regularly.

The wide representation on the health activities committee and the free discussion at meetings of the committee results in a selection of topics covering a broad range of health topics. Subjects covered in recent bulletins are: hay fever, overweight, stress and strain, heart disease, psychosomatic ailments, fatigue, anxiety, and emotional maturity. Topics planned for the near future are: colds, home and child safety, cancer, care of the eyes, hearing problems, and medical misinformation.

Preparation of the monthly health bulletin, after selection of the topic, is the responsibility

Display racks and bulletin boards provide a means for distribution of health materials at the Richland, Wash., atomic products plant. (Left) One information rack is located in the waiting room. (Right) Copies of the monthly health bulletin are being posted.

of the medical advisers and representatives of the employee and public relations department. The medical group provides the technical information, and the others organize the material, plan the layout, and arrange for printing and distribution.

The monthly bulletin is usually a highly attractive, easy-to-read presentation of the essential facts, which have been appropriately illustrated. The cover bears the title and a design which catches the eye and arouses curiosity and interest. Because of the wide range of job requirements, all educational levels are represented among the employees. Consequently, the contents of the bulletin must be simple enough for those with limited education, yet interesting enough to hold the attention of the many scientists and other highly educated personnel at the plant. The number of comments, questions, and requests for additional information that the bulletin provokes indicates that the material does meet these requirements.

Many techniques are used to increase the interest and readability of the bulletins. Material is arranged in short sentences and paragraphs for easy understanding. Spacing is adequate. The pages do not look "crowded." Technical words, when they are used, are explained. Essential points are made more vivid by the use of illustrations. Important points are numbered, set off, and summarized.

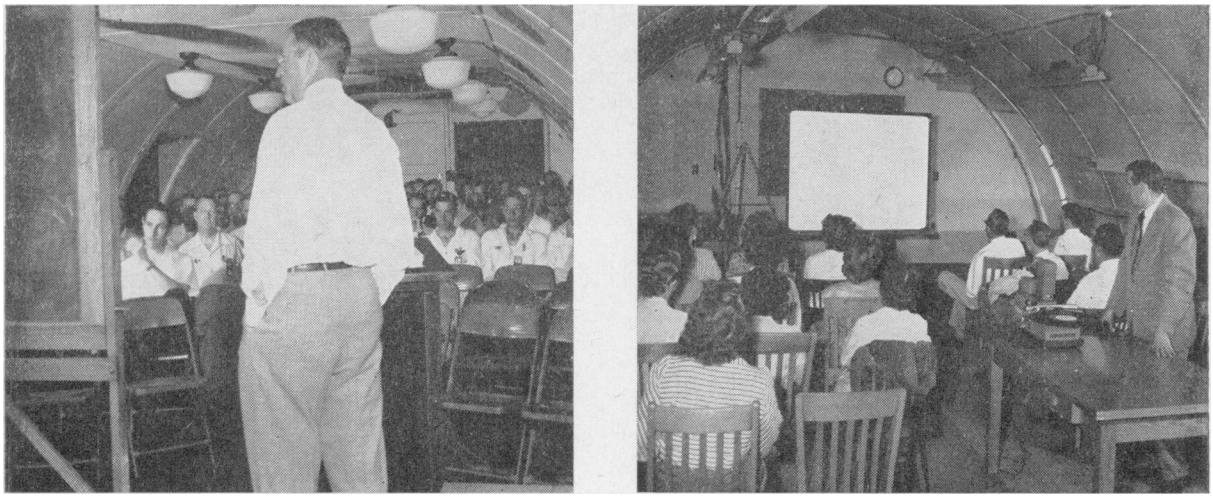
Publicity is given to the monthly health bulletin in the weekly plant newspaper and occasionally by poster displays. The bulletins are regularly distributed to 8,600 employees.

Other Activities

Monthly health and safety meetings are held for each unit or for smaller groups throughout the plant. At these meetings, the health topic is discussed by a leader, who may be the unit supervisor or one of the employees selected to lead the meeting on a rotational basis. All supervisors receive a copy of the bulletin through the plant mail system in advance of general distribution so that they may review the monthly health topic before it is brought up for discussion at the next meeting. When the supervisor does not lead the meeting, as often happens, he may give his advance copy to the employee who is responsible for leading the meeting. At the conclusion of the health and safety meeting, the health bulletins are generally distributed.

These meetings are not necessarily restricted to the designated health topic, however. If the meeting leader feels that another situation peculiar to his group deserves preference in discussion, that situation or subject, rather than the current health topic, may be discussed.

Also, by contacting his department representative, any employee may have any problem in which he is interested brought up for discus-



Health and safety meetings are held monthly at the Hanford Atomic Products Operation. (Left) A group supervisor discusses the health topic with the men in his unit. (Right) A small group is ready to watch a sound filmstrip on the current health topic.

sion at the health and safety meetings. And, as a matter of course, additional information is always available to the individual through regular plant medical facilities.

Speakers from the medical staff or from the public health profession are frequently invited to address health and safety meetings when there is a need for more professional or technical information than can be provided from within the groups. This adds interest to the meetings through a change of routine. Films are also made available for these meetings and are usually correlated with a talk.

The health activities committee also has contact with other plant and community groups and frequently works with these groups on problems of common interest. Home accidents constituted one such problem in which the plant safety unit cooperated with the committee. The two groups prepared a health bulletin which was printed as a joint endeavor.

Because the health bulletins almost invariably provide information of value for the entire family, employees are urged to take them home. Close relations with families are maintained by plant representation on the local community health council in order to encourage family participation in the plant health programs. As a result, cooperative programs with the community health council are frequently promoted. Typical programs which have had such joint promotion with the community health council are the home accident prevention campaign, and two fairly extensive campaigns on colds and weight education. These campaigns will serve to illustrate the functioning of the health activities committee and reveal the means used by the committee in presenting health information.

Special Health Campaigns

At its October 1953 meeting, the committee reviewed monthly absenteeism graphs which showed that two high peaks of absenteeism were occurring annually. One peak occurred in the late fall or early winter. Following discussion with the medical staff, the committee concluded that this late fall rise in absenteeism was due to colds and other respiratory infections. On the basis of this information, the problem of colds was selected as the health topic for the December 1953 health bulletin.

This special bulletin pointed out the high prevalence of colds, then briefly explained the common cold and how it is spread. It outlined the importance of prevention and the several steps to be followed in treatment.

Discussion of the bulletin topic was coordinated with the showing of a film (*6*), "How to Catch a Cold." About 125 showings of the film were given at monthly meetings throughout the plant to a total audience of more than 3,000. Posters in sets of six were also provided with the film and were displayed throughout the

plant. By changing the posters each week, interest in the film and health topic was maintained over a period of 6 weeks.

Another special campaign concerned the problem of overweight and weight control. After a community survey showed that 27 percent of the group studied was overweight and that 12 percent could be classified as "dangerously obese," the committee requested a study of plant personnel. A check of a sample group revealed that 44 percent were at least 10 percent overweight and that 20 percent exceeded their ideal weight by 20 percent or more.

This information prompted the committee's decision to make overweight the next monthly health topic. A film (7), "Losing to Win," was made available for the safety and health meetings, and again posters were displayed. Communitywide coverage for the overweight campaign was arranged by enlisting the aid of the community health council. A series of special articles was written for the local press, and several radio broadcasts, including a 30-minute panel discussion, were arranged.

Other Health Education

The plant medical program at the Hanford Atomic Products Operation presents many additional opportunities for health education. These opportunities are utilized to varying degrees and will be listed here as a further indication of what can be done in the way of health education in industrial organizations. It must be said, however, that every plant will have a program which is highly individual, based on such factors as type of personnel available, extent of medical services and facilities, plant size, management enthusiasm, and other related conditions.

The first opportunity for health education of the worker is at the time he receives his preplacement physical examination. This initial contact with health education, followed by the periodic physical examinations, indirectly impresses upon the employee the importance of continuous medical supervision. Through these contacts, he gains a respect for medical personnel (or the opposite, depending on how he is handled) and is guided toward wholesome consideration of his health. This experience may be made more effective by personal counseling and interpretation of the medical findings to each individual, regardless of his present physical status.

The orientation of all new employees offers another good opportunity to promote health education. Here the worker is introduced to plant facilities and procedures. A block of time during this training at the Hanford plant is devoted to a description and explanation of the company's medical facilities and medical services program. Also, a booklet which describes the industrial medical program is given to the incoming employee.

The industrial nurses are key persons in health education. Because of their position, they see employees at times when their advice will be most willingly accepted. The employee who is having trouble, whatever it may be, and goes to the nurse accepts her at once as a person with the knowledge and skill necessary to help him. He is interested in specific help and will be receptive to her advice. Consequently, he is well disposed toward whatever she may have to say to him. Of course, when these conditions are satisfied, learning becomes more effective.

A plant policy requires that employees report to the first aid station for permission to return to work after illness. Here again, the industrial nurse has an opportunity to offer effective health counseling at a most advantageous time.

Employees with a high frequency of absences or accidents are interviewed by industrial physicians; their purpose is to give assistance in situations which may require medical attention. This program was instituted as the result of studies initiated by the health activities committee.

Throughout the plant there are information racks which contain booklets of interest to all workers. Many booklets on health topics, when they are available, are distributed by means of these racks. Information and bulletin boards are available at 150 locations throughout the plant.

Summary

Health education is essential in most modern industrial health and medical programs. At the Hanford Atomic Products Operation, a plant operated at Richland, Wash., for the Atomic Energy Commission by the General Electric Company, a health activities committee with wide employee representation has been organized to carry out an effective health education program. The committee offers an opportunity to gain wide support for health education activities.

In the health education plan described in this report, a monthly health bulletin is published and distributed to all workers. Health and safety meetings are held once a month, at which time the topic of the health bulletin is discussed. Films, speakers, and special programs are arranged. Other opportunities for health education include preplacement and periodic physical examinations, an information program, information racks, and all visits to the industrial nurses and the first aid stations.

Conclusions

The directors of the Hanford medical staff believe that the health education activities contribute materially to the benefits achieved by the overall health and medical program. Over the last 5 years, absenteeism because of sickness has averaged 3.9 days per male employee and 7.4 days per female employee. The best national estimates for industry are 8 days for male employees and 12 days for female employees (*8*).

That these benefits, when combined with other favorable health and medical programs, extend beyond the confines of the plant is evident in many factors. For example, the average hospital stay in the single industry community of Richland is 5.3 days. The State of Washington average is 38 percent higher. The death rate in Richland, after correction, is one-half the expected death rate (*9*).

Experience with the work of the health activities committee has revealed a number of advantages in having a planning group which represents the employees:

The committee provides a means of expression for all plant employees, through their representatives, and the assurance that their health problems will be considered.

The committee has the opportunity to study and correct real health problems; this would be difficult to do without such a group.

The committee can maintain a continuous health education program and follow up its efforts.

The group provides a medium through which the cooperation of other agencies may be obtained.

Contact with the employees is maintained, so that the effectiveness of the health education program may be judged and weaknesses may be noted.

The interest of committee members in promoting good health among all their contacts is assured.

Plantwide representation assures the consideration of broad interests and varied viewpoints.

REFERENCES

(*1*) Health—24 hours a day. Occup. Health 12: 114 (1952).

(*2*) A small plant group cooperative medical service. Indust. Med. & Surg. 22: 34–36 (1953).

(*3*) Bolton, L.: Industrial nurses should practice preventive care. Occup. Health 12: 159, 166 (1952).

(*4*) McDevitt, I.: Philadelphia Visiting Nurse Society serves industries successfully. Occup. Health 12: 165–166 (1952).

(*5*) Mallery, O. T., Jr.: The industrial physician—Past, present, and future. Indust. Med. & Surg. 21: 286–288 (1952).

(*6*) How to catch a cold. A Walt Disney production. Association Films, 1951. Available on loan from Association Films, 351 Turk St., San Francisco, Calif., or from International Cellucotton Products Company, Chicago.

(*7*) Losing to win. A Jerry Fairbanks production. Association Films, 1952. Available on loan from Association Films, 351 Turk St., San Francisco, Calif., or from the Metropolitan Life Insurance Company, New York, N. Y.

(*8*) Rosenau, M. J.: Preventive medicine and hygiene. Ed. 7 edited by K. F. Maxcy. New York. Appleton-Century-Crofts, 1951, p. 1098.

(*9*) Norwood, W. D., Fuqua, P. A., and Sachs, R. R.: Community health planning. J. A. M. A. 154: 44–49 (1954).